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ABSTRACT

The elements of a comprehensive statewide plan for educational improvement in North Dakota are viewed in condensed form in this document. The plan prescribes an expanded leadership role for the State Department of Education and requires a vital new commitment of higher education to the problems of public education. Educational objectives of the plan are presented, the main objective being to upgrade the level of preparation of North Dakota's teachers so that the majority of teachers hold degrees. Discussion in this document, one of 6 dealing with the statewide plan, includes: background of the educational personnel problem, elements of a plan of action, a recommended major pilot program, teacher preparation programs, and financial support for the pilot preparation program. Related documents are RC 000 180, RC 004 196, RC 004 197, RC 004 198, and RC 004 199. Particular attention should be given to the companion document (RC 004 199), which contains a description of the personnel situation rather than initiating proposals for improving the situation (as does the present document). (SW)

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Educational Development for North Dakota, 1967-1975

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A Product of the Statewide Study of Education

A PLAN:

Developing and Placing Educational Personnel in North Dakota

RC 000179

The North Dakota Statewide Study of Education

THE NORTH DAKOTA DEPARTMENT OF PUBLIC INSTRUCTION
THE NORTH DAKOTA LEGISLATIVE RESEARCH COMMITTEE
THE UNIVERSITY OF NORTH DAKOTA

1967

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Educational Development for North Dakota: 1967-1975

Developing and Placing Educational Personnel in North Dakota

A Product of the Statewide Study of Education

RC 000 179

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PREFACE

This document contains—in highly condensed form—the elements of a comprehensive, statewide plan for educational improvement in North Dakota. The plan includes specific recommendations for (1) legislative action, (2) action by the State Department of Public Instruction, and (3) action by the State's colleges and universities. The plan prescribes an expanded leadership role for the State Department, and it requires a vital new commitment of higher education to the persistent and compelling problems of public education.

Central to the plan of action are these basic ideas for educational improvement: eight major targets; for each target, a key to the course of action that will enable North Dakota to achieve it.

(1) **Target:** Increased effectiveness of the public school system.
Key action: A dramatic new program of personnel development, designed to place a qualified teacher in each classroom in the State by 1975.

(2) **Target:** Increased efficiency of the public school system.
Key action: A systematic program to reorganize local administrative units of education.

(3) **Target:** Increased equity in State financial support of the public school system.
Key action: A bold new pattern of public expenditure for education.

(4) **Target:** Increased quality of public school programs.
Key action: Elementary and secondary curriculum and instructional innovation, particularly in the State's 232 twelve-grade districts.

(5) **Target:** Renewed emphasis upon improving legislative and and administrative action programs that affect the State education system.
Key action: A comprehensive program for statewide study, planning, and evaluation as the basis.

(6) **Target:** Intensified leadership services to all levels of education.
Key action: A network of regional service centers of the Department of Public Instruction.

(7) **Target:** More effective and efficient utilization of the State's limited financial and human resources.
Key action: A new pattern of educational expenditure and a new plan of administrative organization.

(8) **Target:** Modernization of the State's educational programs.
Key action: A systematic plan for introducing modern technology into the schools and colleges of the State, and for introducing instructional innovation into classroom practice.

The comprehensive plan is designed specifically to achieve these objectives by 1975.

(1) To consolidate and focus the energies of the State's seven public colleges and universities in a dramatic new program of personnel development, research, and service, thereby to make the classroom teacher a vital part of a continuing research and improvement effort.

(2) To prepare and place 1,950 fully qualified and specifically prepared teachers into the State's elementary schools, thereby to improve the quality of education for elementary school children who otherwise would be taught by underprepared teachers (as 23,000 students now are taught.)

(3) To place each of North Dakota's 144,000 school children in a reasonably organized and administratively effective school district; each such district would contain at least 12 grades of instruction, and its high school would enroll not fewer than 200 pupils in the upper four grades.

(4) To enlarge the scope, focus and effectiveness of educational services offered by the State Department of Public Instruction, through seven regional service centers; each such center would be designed to energize and facilitate local district study. planning, evaluation, reorganization, and program improvement.

(5) To upgrade the level of financial support for the normal and ordinary recurring costs of education; this requires an improved State Foundation Program that (1) equalizes inequities among local school districts and (2) enables school districts to use local tax funds more freely for program improvements over and beyond the State guaranteed minimum (for example, for public kindergartens).

(6) To shift to State Government the responsibility for the extraordinary costs of educational services: the extraordinary costs now are divided inequitably among local districts for such items as school construction, debt service, transportation, and special services for rural isolated pupils.

(7) To employ State funds to reward those local school districts that take the initiative to improve the quality and efficiency of their operations; an appropriate reward would make State aid directly proportionate to the number of fully qualified teachers that a district employs.

Appropriately implemented, this plan for action should guarantee an adequate and equal educational opportunity for every pupil, present and future, in the State education system, regardless of the pupil's place of residence in the State, and without regard to his religion, color, ethnic background, or economic status. The plan is not a static, unchanging blueprint, however. It should be refined and modified each year, on the basis of added experience and continued evaluation.

In the best sense, the plan is a guide to future action. To be most effective, the ideas and proposals herein presented will require intensive and detailed further planning on the part of the colleges

and universities, the State executive and legislative bodies, and local school districts.

Major responsibility for the plan's revision rests with the Department of Public Instruction. A permanent technical planning component should be established immediately by the Department for this purpose.

The Statewide Study Team rejects the idea that continued increases in financial support alone will improve the State educational system in any fundamental respects. Successful plan implementation depends only partly upon new levels of financial support. Success depends much more upon a disciplined reutilization and redeployment of the resources now available to the State. Additional funds will be needed from time to time, to be sure, particularly for key aspects of the personnel development program.

The ideas expressed here are deemed to be valid. Moveover, they are feasible of achievement. Now a serious and systematic review of the proposed plan should be conducted by all responsible educational agencies and institutions. Following that review, a coordinated and appropriate new program of legislative and administrative action should bring the first vital steps of the plan into reality.

* * *

The comprehensive plan for action reflects the cooperative efforts of these principal agencies. These are:

The North Dakota Department of Public Instruction

The North Dakota Legislative Research Committee

The University of North Dakota

Funds to support the statewide study, evaluation, and planning activities were provided by the State Legislature, by the Federal Government—under provisions of Title V, Elementary and Secondary Education Act of 1965—and by the University of North Dakota. Grateful acknowledgement is given to the many State and local school personnel that generously gave of their time and resources to make the study complete.

Kent G. Alm, Director
Statewide Study of Education
September, 1967

A PLAN: DEVELOPING AND PLACING EDUCATIONAL PERSONNEL IN NORTH DAKOTA

Background

North Dakota public schools are overstaffed with underprepared professional personnel. Because of inefficient local district organization, nearly 7,000 teachers are employed to do the work of 6,000. Moreover, 59 per cent of elementary teachers have less than a college degree. This means that over 22,000 children in the elementary schools of the State could pass through eight grades of formal instruction without coming into contact with a degree teacher.

At the secondary level, the situation is somewhat better. Every high school teacher in the State holds at least a four-year degree in an appropriate major. Only 13 per cent hold the master's degree, however, the level of preparation deemed generally to be necessary for adequate instruction in the high schools. The State also lacks a minimum number of qualified special service personnel, including: librarians, counselors, curriculum and instructional supervisors, special education instructors, and school administrators.

In the Statewide Study of Education—conducted by this University in cooperation with the State Department of Public Instruction and the Legislative Research Committee—this has been determined: within seven to ten years, a qualified teacher could be placed in each of the State's classrooms, and suitable service personnel could be employed, if the legislature, the local school districts, and the colleges and universities would begin immediately an appropriate and coordinated action program.

Such a plan of action has been formulated cooperatively by the University, the Department of Public Instruction, and the Legislative Research Committee. The plan is designed specifically to achieve these objectives by 1976:

(1) To prepare and place 1,950 fully qualified teachers into the State's elementary schools; in so doing, to improve the quality of education for the 22,000 elementary school children who now are taught by underprepared teachers. Later, to prepare and place approximately 1,400 new librarians, counselors, supervisors, administrators, and teachers of special education into the school system. Also, to upgrade the basic preparation of a majority of secondary school teachers.

(2) To consolidate and focus the energies of the State's public colleges and universities in a dramatic new program of personnel development, research, and service, that is designed precisely to accomplish the task indicated in (1) above.

(3) To place each of North Dakota's 144,000 public school students in a well organized and administratively effective school district, each such district to provide not less than 12 grades of instruction and to enroll not fewer than 200 students in the upper four grades. (Ninety per cent of the State's pupils now reside within 20 miles of such centers.)

(4) To enlarge the scope and effectiveness of educational services provided by the State Department of Public Instruction, through a network of seven major regional service centers, each such center to energize and facilitate local district study, planning, evaluation, reorganization, and program improvement.

(5) To assure an adequate level of support for normal and current costs of education, through an improved State Foundation Program that depends equally upon local and State sources of revenue, and that further equalizes the ability of local school districts to support educational programs.

(6) To shift to the State government from local districts (that choose so to reorganize) the burden of extraordinary costs of educational services, particularly those costs now borne inequitably by local districts for school construction, debt service, transportation, and special education.

(7) To employ State funds for education in ways designed to reward appropriate local district initiative in improving the quality and efficiency of operations, by supporting districts directly in proportion to the number of fully qualified teachers they employ.

Appropriately implemented, the new comprehensive statewide plan should guarantee, by 1975, an adequate and equal educational opportunity for each present and future public school pupil, regardless of his place of residence in the State, and regardless of his color, ethnic background, or economic status.

A crucial part of the overall task is the plan for personnel development. The immediate task confronting the State's colleges and universities is to prepare some 1,950 appropriately educated elementary teachers and to place them in classrooms that presently are staffed by underprepared teachers. It is to that task that this brief outline is directed. A more detailed and appropriately constructed document will be prepared following discussion of the basic ideas herein contained with appropriate government and/or foundation officials.

The Problem and a Possible Solution

How does one go about preparing 1,950 elementary school teachers in the State's preparatory institutions in less than a decade, with the limited human and fiscal resources available? Some alternatives were considered.

One alternative was an intensive in-service education program that would seek to qualify presently underprepared elementary teachers on-the-job. Were the need for their additional preparation limited to a few education courses, such a program of action might be effective. However, 1,834 of the elementary teachers now in service have completed less than three years of college preparation, and an additional 856 only 90 semester hours or more. Clearly, the underprepared teachers are as deficient in the basic arts and sciences as in professional studies of education. Hence, it would be necessary to move the total general studies curriculum to the school, a manifestly improbable task. Moreover, part-time instruction of teachers on-the-job has never been demonstrated elsewhere to be either an

effective or efficient means to qualify seriously underprepared teachers. Such services are much more effective when provided to already qualified people—as for example, secondary teachers—who are seeking to develop additional or refined skills in limited areas of application.

Another alternative also was considered. This would be to step up the production of elementary teachers through existing preparation programs at the University and in the State colleges. This alternative makes sense but has two basic limitations: first, the typical graduate of a four-year preparation program as often as not will leave the State and not work in the North Dakota school system. Those who do enter the system gravitate to the one or two large school districts where salaries are most attractive and where working conditions and colleagues are manifestly more to their liking. Second, even if the graduate of present programs were placed in one of North Dakota's small districts, the graduate is not equipped by training or experience to grapple with the awesome development problems that confront the 232 small twelve-grade districts where most non-degree teachers are employed:

> She is not prepared to handle the curriculum development responsibilities that must be met if a small district's programs are to be improved significantly. She is not skilled in the use of modern technology that will be needed in these schools to resolve fundamental instructional problems satisfactorily. She is not equipped to view and pursue teaching as clinical method; that is, she is not prepared to diagnose and treat the basic learning problems of individual pupils. Moreover, the typical graduate has not acquired or developed a "sense of mission" that will sustain her in her difficult development work. She has undergone a program that prepared her to work alone, but did not equip her to act as a member of an instructional and clinical research team; she lacks essential behavioral science skills and orientation; and her motivation for entering teaching is not especially relevant to the task of developing the North Dakota educational system. Her alumnae relationship with the University remains essentially social; it might better be that of the clinical researcher.

These attitudes, skills, and understandings could be developed through modified versions of on-going programs; however, the present structure of relationships among existing units within and outside the University would not be conducive to rapid conversion to a needed new program and emphasis.

The situation for prospective teachers is further complicated by the fact that in many of the small twelve-grade districts, school boards are not motivated to employ college graduates. Non-degree teachers cost the district less money. Some school boards and parents find difficulty in believing that adequately prepared degree teachers really can and do produce a better result than the non-degree teacher. State aid funds nevertheless continue to reward these smaller districts, despite their lack of fully qualified instructors. Moreover, many non-degree teachers are long-term residents of the communities in which they teach, hence they themselves help to perpetuate the basically unsound condition.

To get at the problem, then, the State must move simultaneously on different fronts. As described earlier:

* The State aid system must be redirected to reward those districts that employ qualified teachers.
* Incentives must be given to energize and facilitate the rational reorganization of local districts so that the children in the small twelve-grade districts—as well as those relatively few in isolated rural areas—might be served better.
* The colleges and universities also must contribute significantly. What is needed first of all is a different kind of elementary teacher: one skilled in curriculum development and the individualization of instruction; one who has developed these skills from a strong liberal arts and behavioral science orientation, and from extensive clinical research.
* Further, the new kind of elementary teacher must be produced in numbers sufficient to staff the classrooms now occupied by underprepared teachers; at the latest, this task should be completed by 1975-76.
* The new kind of elementary teacher also must be induced to accept (and continue in) employment where she is most needed: i.e., in the State's 232 small twelve-grade districts.

Elements of a Plan of Action

To approach this problem—recognizing its several interrelated dimensions— the Statewide Study Team recommends that the University of North Dakota mount a major pilot program which would encompass the following actions:

A NEW PROGRAM

* An experimental five-year preparation program would be developed and introduced for elementary teachers.
* The program would rest upon two full years of study in the appropriate liberal arts.
* Students would be recruited and enrolled in their junior year. This would constitute the first "professional" year of the proposed five-year program.
* The junior year would be comprised essentially of behavioral science content; the program's faculty must make that content relevant and appropriate to the study and practice of education.
* The fourth year would emphasize carefully supervised clinical practicums in the diagnostic and prescriptive procedures of clinical methodology, and would involve the student intensively in the nature and complexity of the developmental tasks that confront her as teacher-clinician.
* The fifth year would be spent in full-time residence in a cooperating school, as a member of an **instructional team** that is constituted precisely to meet the developmental requirements of its school-community. For that year, the instructional team would **replace** underprepared teachers in the school, in order that the full responsibility for educational performance and improvement would fall upon resident clinicians.
* Interspersed through the program, as appropriate, would be intensive emphasis upon the formal and clinical study of rural, urban, and—to a lesser extent—world affairs, as they relate to education.

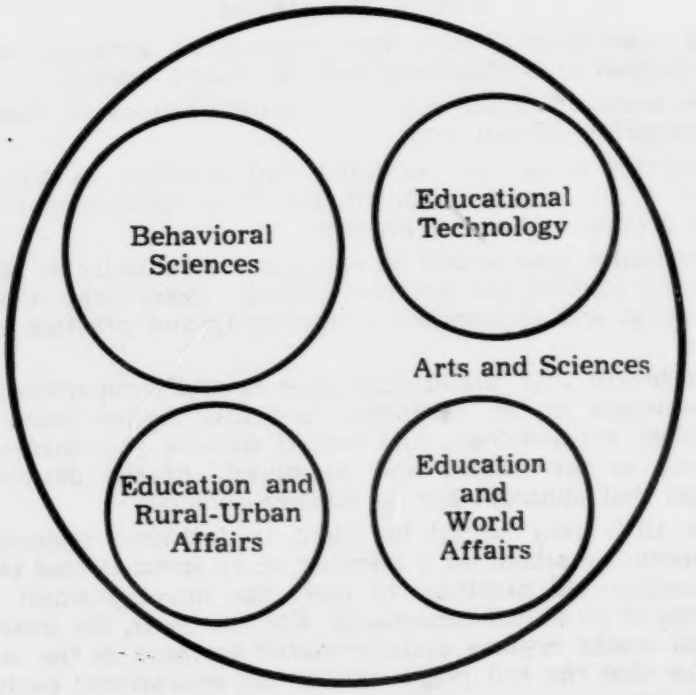
* The program is designed to meet normal degree requirements at both the bachelor and masters levels, and to qualify the graduate for teacher certification not only in North Dakota but also in the other major states.

A NEW PROGRAM VEHICLE

* To develop and conduct the pilot program, the University would establish a new **ad hoc** school of behavioral sciences that is authorized to develop, manage, and conduct the experimental program in all its diverse aspects.
* The school would have a full time director, responsible to the Vice President for Academic Affairs, who would form an academic management team to direct and facilitate program development and implementation.
    (1) Behavioral sciences
    (2) Educational technology
    (3) Education and rural-urban affairs
    (4) Education and world affairs

The school would not necessarily organize itself formally into units along these lines; its faculty will remain small and unified throughout the experiment. With the strong liberal arts base upon which the three-year program rests, the school might be depicted graphically as follows:

New School for Educational Innovation and Development



* The faculty of the school will be comprised essentially of behavioral and social scientists, systems analysts, and specialists in rural, urban and world affairs. These scientists and humanists would, in collaboration with clinical professors of

education, build such new courses as would be required, instruct the students, and engage in continuing and systematic research of fundamental questions of education and learning.

* The faculty will review student performance, in both its on-campus and clinical dimensions, and recommend the conferring of the appropriate degrees upon those who perform successfully.
* The deans of Education, Arts and Sciences, and the Graduate School will transmit the faculty's recommendation to the appropriate authorities for the awarding of the appropriate bachelors and masters degrees.
* During a proposed eight-year period of experimentation, the school would be free to innovate in content of curriculum, methods of instruction, and in design of clinical experience. In its first year of operation, the faculty would develop a detailed curriculum and instructional plan and transmit it to the Vice President for Academic Affairs, and to the University community. Staff members of the school would be expected to consult with campus and cooperating authorities concerning that program; however, it should be understood that the experimental program— in order to retain its experimental character—would be responsive only to the most general of the University's academic and curriculum requirements.
* As with Honors College students, all relevant academic affairs of the University will be opened to the students for optimal individualization in programming.
* To facilitate communication and understanding of the school's programs and operations within the University, an advisory panel of deans will be established, comprised of the deans of Education, Arts and Sciences, Engineering, and the Graduate School, plus such other officers as the Vice President for Academic Affairs may elect.
* Heavy reliance will be placed upon outside consultants, particularly in the curriculum building and evaluation phases of the new program.

STUDENTS

* Students will be recruited who evidence a desire to commit themselves to a challenging new program, and who demonstrate measurable potential to complete a demanding program that will lead ultimately to the master's degree and will include relevant academic studies, clinical research, and a full year of resident clinical practice in a cooperating school.
* During the first year of program operations, students will be recruited simultaneously to enter all "professional" levels in the program. (To some extent, this may compromise the innovative quality of the experience for those who enter initially at academic years four and five; it is deemed to be necessary, however, in order to establish appropriate clinical relationships with cooperating school districts in the State at the onset of program operations.)
  Three years hence, students will be admitted only at the third and fourth year levels.

* Beginning September, 1968, approximately 200 students will be enrolled in the on-campus program, and up to 100 will enter the fifth year clinical residence program off-campus. The enrollment would be stabilized at that level in subsequent years. By 1970, the University will undertake in significantly greater numbers the advanced preparation of counselors, librarians, administrators, special education instructors, and curriculum and instructional supervisors.

* The experimental program will be designed to produce the desired new kind of elementary teacher—one who views, accepts, and skillfully pursues teaching as clinical method—in sufficient numbers to place 800 graduates in the schools by Fall, 1976. Beginning in the Fall, 1970, major elements of the University's pilot program would be introduced in the State colleges, so that they also might accept responsibility to prepare the numbers of teachers needed by 1976. Estimates of planned enrollments are summarized in Table 1.

TABLE 1

Enrollment by Level in Elementary Teacher Preparation Program

A. Pilot Project	University of North Dakota Enrollment									
Academic Year	1968	69	70	71	72	73	74	75	80	GRADS.
Third Year	100	100	100	100	100	100	..	..	..	
Fourth Year	100	100	100	100	100	100	100	..	..	
Firth Year	100	100	100	100	100	100	100	100	..	800
TOTAL	300	300	300	300	300	300	200	100	..	800

B. Continuing Project		State College Enrollment							
Academic Year	Development	1970	71	72	73	74	75	80	GRADS.
Third Year	Period &	200	225	275	250	200	200	200	
Fourth Year	Professor	100	200	225	275	250	200	200	
Fifth Year	Preparation	...	200	200	225	275	250	200	1150
TOTAL		300	625	700	750	725	650	600	1150

C. Total Development	Total Enrollment									
Academic Year	1968	69	70	71	72	73	74	75	80	GRADS.
Third Year	100	100	300	325	375	350	200	200	200	
Fourth Year	100	100	200	300	325	375	350	200	200	
Fifth Year	100	100	100	300	300	325	375	350	200	1950
TOTAL	300	300	600	925	1000	1050	925	750	600	1950

* Students necessarily would range in age from 19 to 60, an interesting and potentially instructive intermix. This range in age and experience results from a recruiting effort aimed at all potentially productive but underprepared elementary teachers now in service; recruitment is designed to bring them into the program as appropriate, at the third or fourth

year level. By this means, it is anticipated that as many as 30 to 40 per cent of the elementary teachers now in service ultimately may qualify as career clinicians. The University and colleges, of course, would determine which of these teachers are qualified to enter the pilot program; the University and State colleges would administer the continuing programs utilizing appropriate admissions policies.

THE COOPERATING CLINIC-SCHOOL

* To provide the clinical component required by the program, the University—and subsequently each State college—will establish a continuing relationship with selected twelve-grade districts that wish to qualify their teaching staffs for improved elementary education.
* Initially, the University's new school will seek out districts that wish to cooperate, i.e., districts prepared to replace or displace their underprepared teachers with instructional teams from the University program. Up to six such districts will be selected in the first year of operation; an additional five to seven will be chosen subsequently. By 1975, the University and State college program will involve every twelve-grade district in the State.
* The University and the board of education of the cooperating district would enter into a formal agreement to conduct the program. Such agreement will be based upon a plan of personnel development for the district that is mutually satisfactory to the district and the University. (As indicated later, the local district will contribute significantly to the support of the program.)
* Instructional teams (comprised of an appropriately complementary intermix of fifth-year resident clinicians) will be assigned to block units in the cooperating school(s) in the district. A unit might be comprised of (a) primary grades 1 - 3 or 1 - 5 (b) upper elementary grades 4 - 6, or (c) junior high school grades 7 - 8 or 6 - 8. The idea is this: in order to introduce a desired innovative and research component into the school, the instructional team must have full responsibility for its unit of instruction. Fifth-year residents will not be assigned in other than the instructional team framework, although in some instances the instructional team in a school may include an already qualified teacher now in service.
* In addition to the positions for instructional teams, the cooperating districts also will provide fourth year clinical internship (student teaching) opportunities. As the program matures, it would be desirable also to provide fourth year internships in some of the nation's most innovative schools, wherever these may be located.
* The new school faculty—scientists, humanists, and clinical professors—will design the character of the fifth year clinical work in the school, with the full knowledge and cooperation of the clinic district. In large part, research would be designed on-campus but would be implemented by the instructional teams during their year of clinical residence, as part of their M.A. program.

* The key to effective program operations in the cooperating school districts is the permanent residence there of a full-time clinical professor. This staff member of the new school will be responsible to:
  - (a) Participate in the design of the on-campus program, and particularly in the construction of the clinical and research aspects of the program.
  - (b) Develop and cement appropriate relationships with the cooperating school(s) in the district, particularly as they affect the on-going operations of the district.
  - (c) Supervise the fourth year interns that may be assigned to the cooperating district.
  - (d) Conduct regular, on-going seminars with the resident clinicians in the district, usually at a ratio of about 15 to 1.
  - (e) Monitor the graduate level independent study and research of resident clinicians, at an average student-professor ratio of 15 to 1.
  - (f) Facilitate the involvement of on-campus personnel in establishing and maintaining an effective dialogue with the district concerning both the research and operational aspects of the program.

THE NEW EDUCATIONAL TECHNOLOGY COMPONENT

* The new school will establish firm working relationships (e.g., with the University faculty of engineering and natural sciences) in order to introduce an appropriate systems component into the formal preparation and clinical practice of prospective teachers. Specifically, these steps are indicated:
  - * Establish a position within the new school for a professor of educational technology.
  - * Look to this professor to assist in resolving the growing number of problems of communication systems, systems analysis, decision-making, and technological applications to practical educational problems.
  - * Anticipate that elements of decision-making in the classroom, in the school district, and in the State system of education, are appropriate subjects for systems analysis and that teacher-clinicians as well as administrators may well require instruction in these areas.
  - * With an eye to educational technology, anticipate the consequences of the fact that North Dakota is somewhat decentralized in population, with the majority of its students now residing in districts that enroll fewer than 200 in their high schools. Given a better scheme of organization for education in the State, the problem of communicating up-to-date information (via microimage devices and mass communication systems) will continue to be a major challenge to the new school.

STUDENT PERSONNEL COMPONENT

* The new school faculty will conceive, develop, and introduce an appropriate student personnel component into its academic and clinical operations. These steps are indicated:

* Design and introduce extra-class experiences that are designed to acquaint students fully with the developmental problems now confronting the State. Enthuse students—through appropriate indoctrination and discussion groups—to become committed to alleviating these problems through an artistic application of their clinical skills and understandings.
* Take advantage of the wide age and experience intermix, both in and outside the classroom, to maximize peer understandings of the educational development tasks involved in teaching.
* As soon as practicable, design a "living-learning" unit (or modify a present structure) in which the on-campus students in the program may share the same dormitory, food-service facilities, classrooms, conference, and reading-discussion areas.
* Interact third and fourth year students with the State's outstanding people from agriculture, business, government, social work, education, and women's affairs. These interactions usually are most appropriately handled as part of impromptu small discussion groups in the "living-learning" unit. What is sought here is a spill-over from already capable and committed people to the intellectual and personal challenges of educational reform and improvement in the State, particularly in the classroom.

AN INNOVATIVE INSTRUCTIONAL METHOD

For preparing prospective teachers, the new school of behavioral sciences will develop and introduce the style of instruction that should be utilized—with appropriate modifications—in the elementary schools of the State. There is no escape from the fact that teachers teach as they themselves were taught in college. Typical university instructional method fares poorly in the elementary and secondary schools. These steps are indicated:

* Divide each student's program appropriately for independent study, peer interaction, student-professor discourse and dialogue, clinical observation and demonstration, clinical practice and research.
* Encourage the prospective teacher to acquire the attitudes as well as the skills of the behavioral scientists—by working directly with them—make certain, however, that the behavioral scientists themselves are seriously engaged in the clinical study of relevant aspects of education and learning.
* In formal courses—which obviously must be included in the program—engage the clinical professors with the students to analyze and discuss the processes of communication and decision-making that transpire during the formal teaching of the course. This should not threaten the behavioral scientist, humanist, or rural-urban specialist in the new school, since he should be as seriously concerned with that aspect of the student's preparation as with the formal confrontation of concepts, ideas, and methodology of his course.
* To the extent possible, program all new basic courses so that students may proceed at individually set tempos. Routinize

information-giving to the fullest. Maximize student-professor dialogue on relevant aspects of educational development. Engage the student actively in the generation and examination of hypotheses, employing clinical rather than laboratory method, however.

* Individualize instruction to the fullest extent possible, recognizing that this will be better accomplished after two to three years of program experience. Seek out means to involve students in the development of continuous progress units that are relevant to their own preparation. When funds are available, experiment with computerized instruction in the basic courses.
* Use fourth year students as discussion leaders with third year students, and fifth year instructional teams as explicators of the clinical method.
* In the initial years, involve master teachers from some of the nation's most innovative schools. Use them as a panel of advisors. In selected cases, borrow such teachers to head-up fifth year instructional teams in particularly challenging schools.

STAFFING AND STAFF DEVELOPMENT

The new school will recruit its nucleus staff from among the University's most relevant departments, using as criteria: the professor's competence in his field, and his interest in pursuing systematic study and experimentation in education.

* At minimum, the initial staff should include a psychologist, cultural anthropologist, sociologist, economist, rural-urban specialist, systems analyst, humanist, and five or more clinical professors.
* Actively seek to involve staff members from the State colleges, both as faculty and doctoral fellows, thereby to enable these institutions by Fall, 1970, to begin to develop their own preparation programs.
* Additional recruiting will be necessary from the outside. However, the residual benefits from the staff's developmental experience should accrue to the University and to the State colleges.
* During the continuing eight-year experiment, the new school's staff should not exceed 21-25 members, including members of the management team and off-campus clinical professors. Contract appointments should be considered for any additional faculty members who would be required during maximum enrollment periods. These members would be likely recruits for the State college programs.
* Staffing requirements for the pilot program at the University and for the sustaining program in the State colleges are summarized in Table 2.

THE NEW DOCTORAL PROGRAM IN HIGHER EDUCATION

The new school of behavioral sciences will develop and initiate at program onset a new doctoral level program for college professors, specifically those who—regardless of their field of academic specialization—intend seriously to pursue education and learning as their major field of application. These steps are indicated:

- Enroll as doctoral candidates in the new school's program approximately 15 prospective behavioral scientists, humanists, engineering technologists, rural-urban specialists, and clinical professors, who now hold the M.A. or equivalent degree.
- The doctoral candidates should work directly and responsibly with the professorial faculty in conceiving, developing, and initiating all aspects of the preparation and research programs.

TABLE 2

Staffing Requirements

Academic Year	1968	1969	1970	1971	1972	1973	1974	1975	1980
UND Pilot Program On-campus	9	9	9	9	9	9	(9)	(9)	(9)
UND Clinic Professors	6	6	6	6	6	6	6	6	.
UND Total	15	15	15	15	15	15	(15)	(15)	(9)
State College Program On-campus	.	(8)	15	22	25	26	22	20	20
State College Clinic Professors	.	.	(6)	13	13	15	18	17	13
State College Total	.	(8)	(21)	35	38	41	40	37	33
Total Program On-campus	9	(17)	24	31	34	35	(31)	(29)	(29)
Total Clinic Professors	6	6	(12)	19	19	21	24	23	13
Management Team	4	4	4	4	4	4	4	4	4
Analysis and Evaluation Team	3	3	3	3	3	3	3	3	3

- A professor-doctoral student ratio of 1:1 can and should be established with each academic and on-campus clinical professor working directly with a counterpart doctoral fellow.
- The research undertaken by the doctoral candidates should necessarily relate to an important aspect of education and learning. The research should be relevant to the specific development problems that are under study and experimentation in the cooperating schools. Doctoral candidates with other interesting—but in this sense irrelevant—research projects should follow the regular Ph.D. program in the appropriate college, but not in the new school.
- The new school faculty—with suitable consultation from supporting departments and colleges—will organize the seminar, independent study, and research aspects of the candidates' programs. Substantial clinical research components also will be built into the programs. The doctoral student—depending upon his area of theoretical orientation—will be engaged significantly in hypothesis generation, examination, and generalization. Typically, he will work directly with a fifth year instructional team, or with several such teams, in the clinical implementation of certain selected hypotheses.
- Depending upon the sophistication with which the new school's staff ultimately can approach its research commitments, doctoral students may be engaged solely in individual investigations related to the program, or in the implementation of a broader research design established by the new school.

ANALYSIS AND EVALUATION COMPONENT

The new school will develop and introduce a systematic program of analysis and evaluation of its program activities, both on and off-campus.

* The program itself should be considered to be experimental in nature (although suitable controls will not always be available, as they are in classical laboratory research.) Careful descriptions of program activities and of observable program results will be recorded systematically.
* The new school's own programs of research will be made explicit, particularly as they relate (a) to the development of clinical method within the preparation program and (b) to the systematic introduction of clinical method through the fifth year instructional teams in the cooperating schools.
* A small but separate staff component will be established within the new school for this purpose.
* Studies of program impact will be conducted in the schools and school districts themselves. Initially, these will focus upon the practical problems created in and for the cooperating schools as they participate in the new program. Impact upon teachers and students will be estimated. Careful attention will also be given to the study of the program's impact upon the community that supports the cooperating school, to determine whether and how the level of community support is affected by innovation.
* Because of the intensive and specialized commitment to analysis and evaluation of the new school's activities, special funding should be sought for this work alone.

STATE AGENCY COOPERATION

The new school will develop and maintain a supporting relationship with the State Department of Public Instruction and with the Commission on Higher Education.

* One object of the proposed program is to satisfy a crucial State need: to qualify each of its public school teachers for effective classroom teaching. In this way, the University contributes significantly to overall improvement of the State school system.
* A second object of the program is to assist in expanding the capacity of the State colleges to prepare appropriate new kinds of teachers for the State's public schools.
* The University will help materially in this regard by conducting its experiment as a pilot program that the State colleges may examine, adapt, and introduce into their own programs.
* The University also may help by preparing professors who are capable of replicating the experiment in and through the State colleges.
* The State Department of Public Instruction will play a crucial role in assisting in the dissemination of program procedures and results, and in stimulating and fostering acceptance of the program as it develops in the State.

* The State Department of Public Instruction also will play a crucial role in financing off-campus clinical aspects of the program, through its administration of ESEA Title I and Title III funds.

Related Preparation Programs

* During the period in which the new school concentrates upon the development of appropriate new elementary teachers, the University—through existing graduate programs—will intensify its efforts to prepare other needed professional personnel.
* By 1975, the University will undertake—in programs designed for that purpose—to prepare approximately 1,400 educational service personnel, and to up-grade the formal preparation of approximately 1,100 secondary school teachers now in service.
* The University colleges to be involved most intensively in this endeavor are the College of Education, the College of Arts and Sciences, and the Graduate School.
* Statewide requirements by 1975 for graduate level personnel are estimated to be as follows:
  * Special Education Instructors (Elementary) 199
  * Special Education Instructors (Secondary) 85
  * High School Counselors 92
  * School Librarians 284
  * Elementary School Principals and Supervisors 327
  * High School Principals and Supervisors 109
  * General Administrators 236
  * State Education Agency Planning Personnel 24
  * Clinical Professors of Education 25
  * Higher Education Professors of Behavioral Sciences and Related Fields 36
* In most instances, the University will modify existing programs to accommodate the projected new levels of preparation activity. A brief description of each such program and its projected enrollment follows.
* **SPECIAL EDUCATION INSTRUCTORS**
  Selected elementary and secondary teachers will be enrolled in summer institute programs leading over a period of 3-5 years to the M.A. degree in education. Enrollments by year are estimated to be as follows:

	1970	71	72	73	74	75	80	Graduates
Elementary	70	140	210	210	140	70	70	199
Secondary	30	60	90	90	60	30	30	85

* **HIGH SCHOOL COUNSELORS**
  The regular graduate program in counseling at the University will be intensified to enroll students in a full time, on-campus program at the 5th year level, leading to the M.A. in education. Projected annual enrollments are as follows:

	1970	71	72	73	74	75	80	Graduates
Counselors	20	20	20	20	20	20	20	92

* **SCHOOL LIBRARIANS**
  The present undergraduate program for school librarians will be up-graded to the 5th year level. Approximately 202

librarians now in service will be enrolled in a special masters degree program, based principally upon summer institutes. An additional 62 students will be recruited to study full time in a year 'round on-campus program. The projected annual enrollments in the program are as follows:

	1970	71	72	73	74	75	80	Graduates
Librarians	100	200	300	300	200	100	50	284

* **ELEMENTARY PRINCIPLES AND SUPERVISORS**

Approximately 259 persons will be prepared for positions as elementary school principals and supervisors at the 5th year level. An additional 68 will be prepared at the sixth year level. By 1980, those prepared at the 5th year level will be upgraded to sixth year status. The present graduate preparation program will be modified to provide an off-campus externship program, to be conducted at (and in cooperation with personnel of) the seven proposed new regional service centers of the State Department of Public Instruction. In the externship program, principals now in service will be convened for three days each six weeks for intensive clinical study related to the research and development activities of the clinic schools. They will also be enrolled for formal studies on-campus during each of three summer sessions in order to complete the appropriate fifth or sixth year degree.

In support of the elementary teacher training program, elementary principals and supervisors in the cooperating clinic districts will be enrolled in their own advanced preparation program, thereby to insure optimal development of the cooperating districts' instructional programs during the development period. Projected annual enrollments in the elementary principal preparation programs are as follows:

1968	69	70	71	72	73	74	75	80	Graduates
At M.A. Level:									
9	9	18	65	130	260	185	130	30	259
At Ed.S. Level:									
....	....	30	60	90	90	60	30	30	109

* **HIGH SCHOOL PRINCIPALS AND SUPERVISORS**

High school principals now in service will be enrolled in a sixth year externship program (similar to that described for elementary principals above) which, when combined with three successive summer sessions, will qualify 109 principals at the EdS. level by 1975. Annual projected enrollments are as follows:

	1970	71	72	73	74	75	80	Graduates
Principals	30	60	90	90	60	30	30	109

* **GENERAL ADMINISTRATORS**

By 1975, it is anticipated that the number of local school districts will be reduced from 529 to 76. Hence, the number of district superintendents required in the State will be substantially reduced. However, there will be a dramatic increase in the number of persons assigned in local districts to positions as business managers, directors of transportation, instructional supervisors, and related positions. An estimated

236 general administrative positions—with appropriate areas of specialization—will have to be filled by 1975. These will require persons who are prepared principally at the Ed.S. level. The number of districts that may require Ph.D. level general administrators is estimated to be 15.

The University's present general administration program will be modified to provide an externship program for qualified administrators now in service. Coupled with three successive summer sessions on-campus, the program should produce 221 persons at the Ed.S. level by 1975. An additional 15 graduates will be produced at the Ed.D. level.

To assure program continuity and effectiveness among districts that cooperate in the experimental elementary preparation program, qualified general administrators in those districts will be enrolled in an appropriate Ed.S. program at the onset of the elementary training program. Projected annual enrollments for the general administration program are as follows:

	1968	69	70	71	72	73	74	75	80	Graduates
Ed.S:	12	12	24	75	150	225	150	75	25	221
Ed.D:	1	6	16	21	20	15	5	5	5	15

* **STATE EDUCATION AGENCY PLANNING PERSONNEL**

The State Department of Public Instruction proposes to establish seven regional service centers in the State, these to play a potentially vital role in the reorganization of local districts, and in the formulation of appropriate development plans at both regional and statewide levels. Twenty-four new professional positions will be involved by 1975. The University—jointly with the Department—will undertake to prepare these professional personnel for their special planning responsibilities, beginning in 1968. The program will lead in most instances to the Ed.S. degree; certain program participants, however, may complete requirements for the Ed.D.

Projected annual enrollments in the program are as follows:

1968	69	70	71	72	73	74	75	80	Graduates
3	10	17	21	14	7	3	3	3	24

Explorations will be made early in this period to broaden the base of the planning program to include participants from other State education agencies in the upper mid-west area. A regional training proposal for this purpose is now being drafted.

* **HIGHER EDUCATION PROGRAM**

As described earlier, a new doctoral program will be offered through the new school of behavioral sciences. The program is designed to produce 25 clinical professors of education and 36 professors of supporting fields by 1975. Initially, candidates in the Ph.D. program will be recruited from among professors in the State colleges of North Dakota, thereby to enable those colleges by 1970 to mount an appropriate elementary training program patterned after the pilot project at the University of North Dakota.

Projected annual enrollments are as follows:

	1968	69	70	71	72	73	74	75	80	Graduates
Clinical Professors:	6	6	6	20	20	22	25	23	6	25
Related Professors:	15	15	15	10	10	10	10	10	10	36

- **SECONDARY SCHOOL TEACHERS**

The State's two universities will intensify their masters degree program for secondary school teachers in an endeavor to qualify at least 50% of the teaching force at this level by 1975. The program will rest principally upon a series of intensive summer programs that will enable a high school teacher to complete appropriate degree requirements within three to five years.

Projected annual enrollments are as follows:

	1968	69	70	71	72	73	74	75	80	Graduates
High School Teachers:	365	730	1,095	1,460	1,825	1,460	1,095	730	365	1,100

Financing the Pilot Preparation Program

- The experimental program is designed to be largely self-supporting, except for the extraordinary costs to develop and initiate the program. The costs to sustain the program, once established—and to disseminate the program through the State colleges—will be borne principally from combinations of State and local funds.

(1) Program development, management, and dissemination, including provisions for 15 doctoral candidates at the University of North Dakota:

Fiscal Year 1968	1969	1970	1971
$140,000	$535,000	$535,000	$503,000

(2) Analysis and Evaluation Activities

Fiscal Year 1968	1969	1970	1971
$64,000	$132,000	$116,000	$132,000

(3) Clinic Professor Program

Fiscal Year 1968	1969	1970	1971
$57,000	$154,000	$154,000	$154,000

(4) Fellowship Program

(a) For non-degree teachers to enter the experimental program:

Fiscal Year 1968	1969	1970	1971
--	$300,000	$300,000	$300,000

(b) For 5th year instructional teams assigned to displace none-degree teachers in cooperating local district:

Fiscal Year 1968	1969	1970	1971
--	$330,000	$330,000	$360,000

- The proposed funding pattern for the pilot program is as follows:

(1) **Local District Participation**

(a) For each non-degree teacher to be returned to the

University for advanced instruction, the local district will divide that teacher's present salary into two parts: $3,000 will be paid as a fellowship to the teacher to support each nine months of advanced study; up to $1,700 of the balance of the salary will be paid to the University partially to defray the extraordinary costs of the program.

(b) For each 5th year resident teacher who displaces a non-degree teacher, the local district will pay an annual honorarium of $3,600 (12 months); funds will be obtained from the district's entitlement under provisions of Title I, ESEA.

(c) To support the resident clinic professor program, the local district will obtain funds from its entitlement for innovation under provisions of Title III, ESEA.

(2) **University Participation**

The University will provide required space and facilities for the program. Because the University already has committed its State allocation for Fiscal Year 1968-69, it will not be able to make an additional commitment to the program in those years. Beginning in Fiscal Year 1970, however, the University will seek funds through regular legislative appropriation in an amount equivalent to $400 per enrolled student. When coupled with tuition and fees, the University's contribution—over and above space and facilities—should approximate $650 per on-campus student.

(3) **Desired Federal Contribution**

The direct costs to develop and sustain the pilot program through a first 3½ year period (beginning in January, 1968, and extending through June, 1971) must be obtained from other than University, State, or local sources. These costs are estimated to be approximately as follows:

Fiscal Year 1968	1969	1970	1971
$204,136	$511,689	$395,839	$380,389

Financing the Continuing Program

* Beginning in 1970, it is anticipated that the State colleges will initiate a similar program for elementary teachers; the programs are designed to produce 1,150 5th year graduates by 1975.
* In 1969, the State colleges will need approximately $200,000 for detailed planning prior to implementation of their programs. These funds will be requested from the State Legislature.
* Subsequently, through 1975, the State Legislature will be requested also to appropriate funds to cover the costs to the State colleges and to the University that are not covered either by local district or by college contributions. The

amounts required each year beginning in Fiscal Year 1969 are approximately as follows:

FY 69	FY 70	FY 71	FY 72	FY 73	FY 74	FY 75
$200,000	$375,000	$304,000	$786,000	$795,000	$615,000	$615,000

* The amounts to be requested have been incorporated into the proposed new pattern of State expenditure for education in those years, and constitute an integral part of the comprehensive plan of educational development.

THE STATEWIDE STUDY OF EDUCATION

The published materials of the Statewide Study of Education are reproduced in six volumes. These are:

* PERSONNEL NEEDS IN NORTH DAKOTA PUBLIC SCHOOL
* PUBLIC EXPENDITURE FOR EDUCATION IN NORTH DAKOTA
* EDUCATIONAL DEVELOPMENT FOR NORTH DAKOTA 1967-1975: OVERVIEW
* DEVELOPING AND PLACING EDUCATIONAL PERSONNEL IN NORTH DAKOTA
* A PLAN OF PUBLIC EXPENDITURE FOR EDUCATION IN NORTH DAKOTA
* DEVELOPING STATE LEADERSHIP FOR EDUCATION IN NORTH DAKOTA

Copies of these documents are available through the Office of the State Superintendent of Public Instruction, State Capitol, Bismarck, North Dakota.